

Correspondence

COMMENTS ON PICTURE OF THE MONTH, MARCH 1963

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The picture of the month in the *Monthly Weather Review* of March 1963 (vol. 91, No. 3, p. 165) taken by TIROS IV on April 13, 1962, 1320 GMT (not April 14, as was wrongly indicated), shows England and Scotland sharply delineated by afternoon cumulus clouds, while Ireland is only dimly seen because the cloudiness was so poorly developed there.

The question is then asked: Why is England so favored? The answer to this question can be found from an analysis of the weather situation over western Europe at that time.

An outbreak of deep polar air had taken place over the North Sea with a northwesterly to northerly airstream. As is shown in figure 1, the depth of the cold air was greatest over Denmark and decreased gradually toward the west over the North Sea and the British Isles. Over Ireland the cold layer only reached to between 870 and 850 mb. Moreover, the air at 850 and 700 mb. over Ireland was drier than over England and Scotland, which is clearly seen in figure 1 from the numbers denoting the difference between the maximum and the actual absolute humidity averaged for the 850- and 700-mb. levels.

This explains why the afternoon cumulus clouds over Ireland were only small both in horizontal and vertical extent. To the east the cumulus clouds became gradually bigger and more numerous. Over the North Sea some of them produced showers.

Over Belgium and northern France many cumulus clouds are visible as well. But from Normandy and the Seine estuary a clear area extends to the southeast. The lack of cumulus clouds in this area may be explained by the dryness of the air, which is demonstrated by the humidity deficit measured at Paris.

The clouds over western France and those to the northwest of England and to the west of Ireland are frontal clouds connected with the front that forms the boundary of the cold air.

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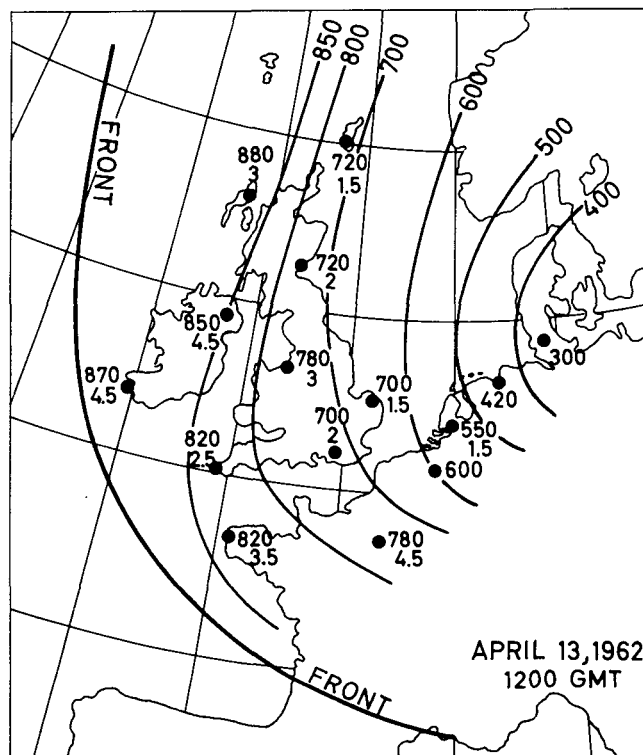


FIGURE 1.—Depth of cold layer on April 13, 1962, 1200 GMT, indicated by pressure level in millibars to which the cold air reached. Lines of equal pressure are drawn. The humidity at each station is indicated by a number denoting the difference between the maximum and the actual absolute humidity averaged for the 850- and 700-mb. levels in gm./m³.